SRS UPDATE

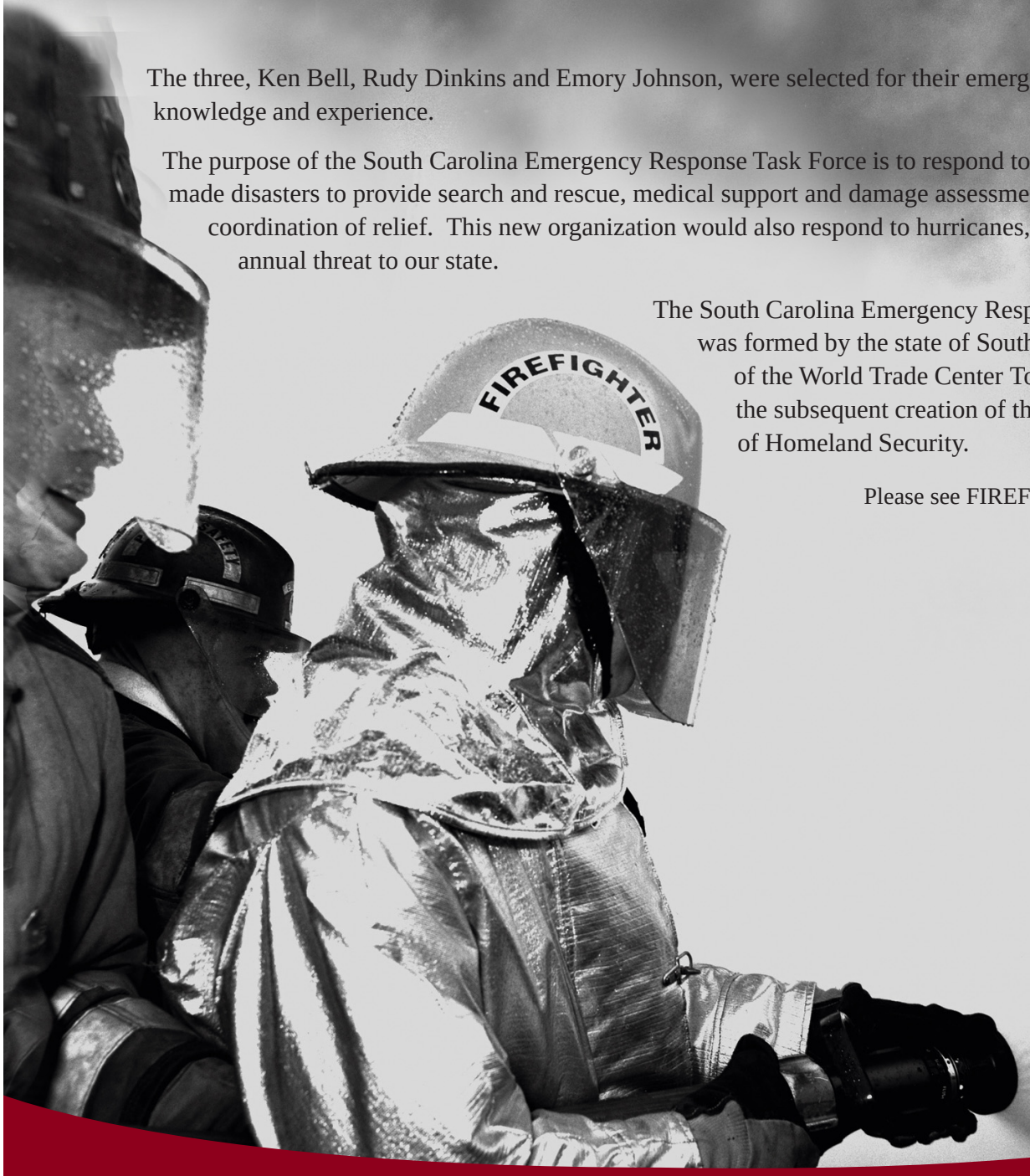
NEWS FROM THE SAVANNAH RIVER SITE • JUNE 2005

SRS Firefighters Selected for South Carolina Task Force

Three SRS firefighters have joined the newly formed South Carolina Emergency Response Task Force, Urban Search & Rescue Team.

The three, Ken Bell, Rudy Dinkins and Emory Johnson, were selected for their emergency response skills, knowledge and experience.

The purpose of the South Carolina Emergency Response Task Force is to respond to natural and man-made disasters to provide search and rescue, medical support and damage assessment, and assist in the coordination of relief. This new organization would also respond to hurricanes, which pose an annual threat to our state.



The South Carolina Emergency Response Task Force was formed by the state of South Carolina as a result of the World Trade Center Towers disaster and the subsequent creation of the U.S. Department of Homeland Security.

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Capt. Rudy Dinkins, Capt. Ken Bell, Firefighter Paramedic Emory Johnson.

The Program Management Group, six key people selected to lead the effort, developed and initiated the South Carolina Emergency Response Task Force (SCERTF). The first phase of this planning created the Urban Search and Rescue Team, South Carolina Task Force One (SC-TF1). SC-TF1 consists of three task force groups, each staffed with 70 members. Each group is staffed with experts in all areas of emergency response. Approximately two years in the making, the task force was recently declared operational.

Ken Bell, a Savannah River Fire Department Captain, is one of six leaders of the Program Management Group and a member of the Command Staff, which provides overall leadership and guidance to the task force. Two other SRSFD members were also selected to fill key leadership roles in the SCERTF organization. They are Capt. Rudy Dinkins, one of six Task Force Leaders and a member of the Command Staff; and Firefighter/Paramedic Emory Johnson, one of six Planning/Technical Support Managers. These SRS firefighters participate in the SCERTF activities, in addition to the important work they accomplish at SRS.

Spent Fuel teamwork generates big savings

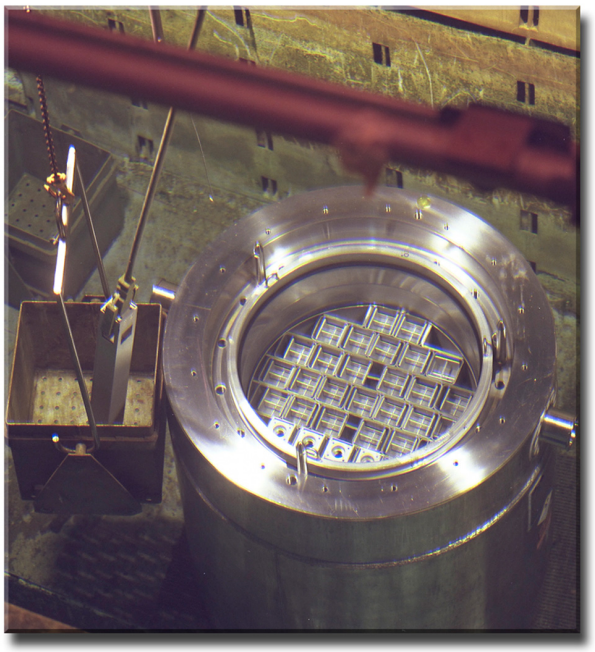
Spent Fuels' overall game plan is the safe receipt and interim storage of irradiated spent nuclear fuel (SNF) assemblies from domestic and foreign test and research reactors. Executing that plan when facing obstacles and a ticking clock is what makes Spent Fuels a world class team.

Recently, this team completed preparations to receive 338 spent fuel assemblies from two foreign research reactors: one in the Netherlands and the other in Sweden.

In order to meet the shipping schedule of the HFR-Petten reactor facility in the Netherlands, the receipt team developed and employed a nonstandard plan and revised strategy that saved DOE an estimated $650,000.

While preparations were being made to receive SNF from HFR-Petten, the R2 reactor in Sweden announced that it was shutting down permanently and needed to start shipments of spent fuel to the U.S. as soon as possible to support their decommissioning schedule.

The Department of Energy-Savannah River asked Spent Fuels to work with R2 to find a way to combine its shipment with HFR-Petten – with only two months to meet the challenge.



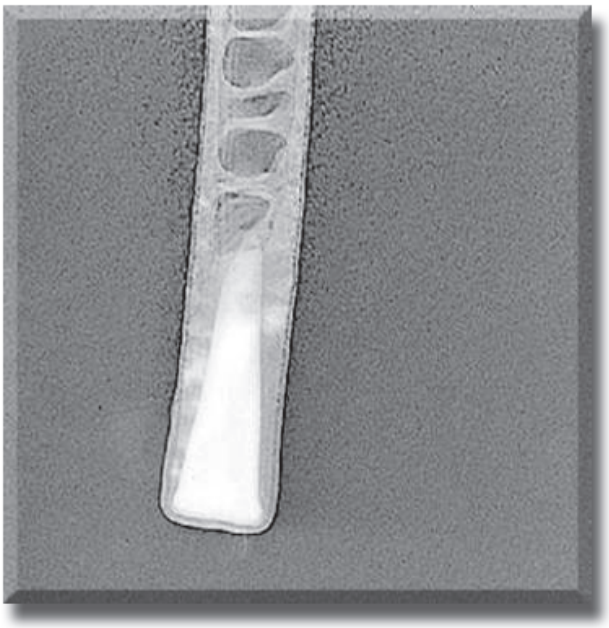
Foreign spent fuel being removed from a shipping cask, resting at the bottom of a water-filled basin at SRS.

Spent Fuels' success in accelerating the schedule saved the R2 facility approximately $250,000 in transportation costs because it was able to combine its shipments with the Netherlands'.

Carbon Nanotubes: An answer to hydrogen storage problem?

A Savannah River National Laboratory (SRNL) research project on novel materials for hydrogen storage has been selected by the U.S. Department of Energy as part of its effort to make hydrogen fuel cell vehicles and refueling stations available, practical and affordable for American consumers by 2020. Secretary of Energy Samuel W. Bodman announced May 25 that SRNL's project was among 70 research projects nationwide that were selected – using a merit-reviewed, competitive solicitation process – to focus on fundamental science and enable revolutionary breakthroughs in hydrogen production, hydrogen storage and new fuel cell technologies.

"DOE's initiative will advance the scientific knowledge necessary to make hydrogen a part of our everyday energy supply," said Dr. G. Todd Wright, Laboratory Director of SRNL. "Being a part of this initiative is a real testament to the importance of the leading-edge hydrogen research that SRNL is conducting."



Carbon nanotubes — tiny structures 1/10,000 the width of a human hair — show promise as a means of storing hydrogen in a solid state.

The SRNL-led basic science research project, which is estimated at about $500,000 a year for the next three years, explores the role of nanotechnology in hydrogen storage.

Storage is one of the key technological challenges that must be addressed to make the hydrogen economy a reality. SRNL is at the forefront of research to develop a low-cost solid-state hydrogen storage material that can safely hold and release significant quantities of hydrogen at a practical temperature. As a fuel for vehicles, solid-state storage of hydrogen would be simpler, safer and more reliable than storage as a liquid or gas.

Led by SRNL's Dr. Ragaiy Zidan, Dr. Steven Serkiz and Dr. Scott McWhorter, the project will study the physical and chemical properties of carbon nanotubes, and the ways in which these tiny structures bond with hydrogen.

Carbon nanotubes are long, thin structures (approximately 1/10,000 the width of a human hair), which can be pictured as a hexagonal lattice of carbon rolled into a cylinder. Recent research has indicated that carbon nanotubes have great potential as a way to store hydrogen in a solid structure because they may be able to bond with large amounts of hydrogen at room temperature.

This project will examine the effect when these structures are doped with a variety of different metals, and will relate physical and chemical properties, such as size, composition and defects, to the nanotubes' ability to bond with and release hydrogen. Researchers will use a combination of laboratory experiments and theoretical modeling to advance their understanding of how metal-doped carbon nanotubes can best be used in hydrogen storage.

SRNL is working with researchers from Virginia Commonwealth University, the Georgia Institute of Technology and Oak Ridge National Laboratory on the project, which is entitled "Elucidation of Hydrogen Interaction Mechanisms with Metal-Doped Carbon Nanostructures."

SRNL is also participating in three other projects, led by Washington University, the Massachusetts Institute of Technology and the University of North Carolina, that were selected as part of the same initiative.

South Carolina awardees: Shahin Rothermel, Samantha Myers, Heather Hughes, Neal Hutsell, Rachel Gann, Brandy Sanderlin and Emily Flora (awardees not shown, Bahskar Mookherji and Jennifer Wiggins).

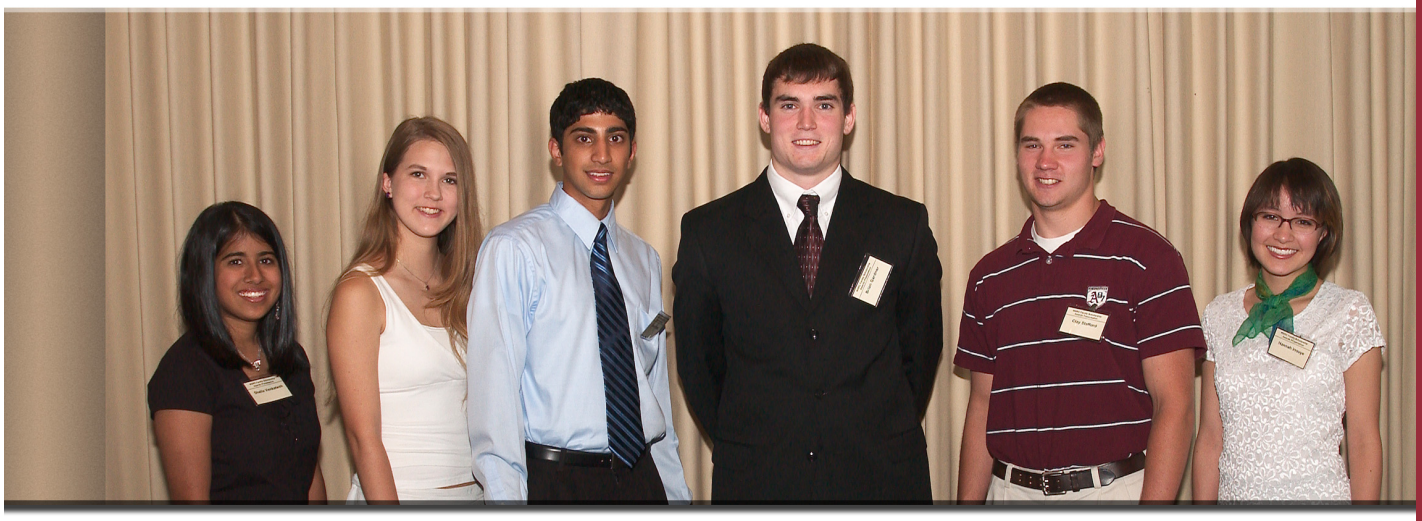
2005 WSRC Family Scholarships awarded

Fifteen students have won $3,000 WSRC Family Scholarships. These winners are sons and daughters of Westinghouse Savannah River Company and Washington Safety Management Systems employees.

WSRC is very proud to sponsor this program that rewards graduating high school students of its employees through college scholarships.

This year's winners are:

- Shivan Bhatt, Lakeside High School, son of Pankaj Bhatt, Closure Business Unit.
- Gail Filpus-Luyckx, Augusta Preparatory Day School, daughter of Paul Filpus-Luyckx, Savannah River National Laboratory.
- Emily Flora, Aiken High School, daughter of Mary Flora, Closure Business Unit, and David Flora, Operations Business Unit.
- Rachel Gann, North Augusta High School, daughter of Steve Newell, Field Support Services Business Unit.
- Brian Gardner, Lakeside High School, son of Curtis Gardner, Closure Business Unit.
- Heather Hughes, North Augusta High School, daughter of Greg Hughes, Closure Business Unit.
- Neal Hutsell, South Aiken High School, son of Dale Hutsell, Closure Business Unit.
- Hannah Inouye, Greenbrier High School, daughter of Mark Inouye, Closure Business Unit.



Georgia awardees: Sheila Venkatesh, Gail Filpus-Luyckx, Shivan Bhatt, Brian Gardner, Clay Stafford and Hannah Inouye.

- Bhaskar Mookherji, North Carolina School of Science and Mathematics, son of Dipankar Mookherji, Closure Business Unit.
- Samantha Myers, North Augusta High School, daughter of Ted Myers, Washington Safety Management Solutions.
- Shahin Rothermel, Aiken High School, daughter of Sohaila Rothermel, Closure Business Unit, and Roy Rothermel, Project Design & Construction Services Business Unit.
- Brandy Sanderlin, Blackville-Hilda High School, daughter of Randy Sanderlin, Operations Business Unit.
- Clay Stafford, Greenbrier High School, son of Cindy Stafford, Savannah River National Laboratory, and John Stafford, Operations Business Unit.
- Sheila Venkatesh, Lakeside High School, daughter of Meena Venkatesh, Field Support Services Business Unit, and Srini Venkatesh, Operations Business Unit.
- Jennifer Wiggins, Westminster Preparatory School, daughter of Skip Wiggins, Closure Business Unit Unit.

The program is open to families of all Westinghouse Savannah River Company and Washington Safety Management Solutions employees. The winners were chosen from over 70 applicants based on general ability, leadership, scholastic aptitude and achievement.

"This is just one of several successful programs we offer to benefit our employees and the members of surrounding communities," said Karen Turner, WSRC Family Scholarships Program Coordinator. "It's a wonderful way to assist those dedicated students who will one day be our leaders throughout the CSRA."

SRNL develops device for precise cleaning inside tanks

Directed Spray Mast inventors Al Siddall, Kevin Counts and Tom Nance.

The Directed Spray Mast overcomes the special challenges of cleaning the inside of storage tanks or other vessels while minimizing the amount of wastewater generated by the cleaning process. The device, developed by the Savannah River National Laboratory (SRNL), works even when the interior of the vessel is only accessible through a small port a few inches in diameter.

The U.S. Patent and Trademark Office recently issued a patent on the device.

The usual way to clean the inside of a vessel uses a high-pressure stream of water. The typical sprayer sprays the entire inside of the vessel. Frequently, however, only specific areas need to be cleaned. The Directed Spray Mast features a unique "elbow" joint that allows it to be aimed at specific areas, spraying only those areas that require cleaning. This minimizes the amount of waste water produced.

The folding design also allows the device to gain access to the inside of the vessel through openings as small as three inches in diameter.

The Directed Spray Mast was invented by Tom Nance and Kevin Counts of SRNL, Al Siddall of SRS and William Cheng, formerly of SRNL.

Supplier Expo enhances WSRC procurement program

The Savannah River Site has nearly 100 strategic suppliers who provide a wide range of products and services, ranging from office supplies to valves for piping. This year's SRS Supplier Expo, which is similar to a trade show, recently gave these vendors an opportunity to interact on site with the end users of the commodities and services they sell.

Interaction with the engineers, mechanics, operators, technicians and other end users at the Savannah River Site benefits the supplier as well as the customer. Frequently, the results of this effort are new or improved products that help SRS personnel perform their jobs more safely and cost-effectively.

Seventy-five suppliers and over 500 employees recently attended the one-day event, held in the site's training facility.

Employees work with suppliers to further improve the products and services supplied to organizations at SRS.

Davis and Plung named Executive and Manager of the Year

Two Westinghouse Savannah River Company managers were recognized recently by the Savannah River Site Chapter of the National Management Association (NMA) for their leadership abilities.

Larry Davis Dan Plung

Larry Davis, manager, Nuclear Materials Management, received NMA's 2005 Executive of the Year award. Dan Plung, manager, Documentation and Information Services, Westinghouse Savannah River Company, is the 2005 Manager of the Year.

Each year the local chapter selects a manager and executive of the year from dozens of nominations submitted by the nominees' employees and co-workers. The selection criteria include demonstrated performance in teamwork, leadership, communications, business results, employee development, self-management and community support. The Executive of the Year is the National Management Association chapter's highest individual award.

Area teachers receive assistance during SRS outreach workshop

Savannah River National Laboratory Director Dr. Todd Wright recently provided Aiken area educators SRS's perspective on the importance of careers in science, math, engineering and technology for Central Savannah River Area (CSRA) students. In addition, WSRC School-To-Work students and mentors participated in a panel discussion to highlight the value of their work-based learning experiences at SRS. The WSRC School-To-Work Program is one of many services that WSRC's Education Outreach Programs Department provides for the CSRA. For additional information regarding SRS Education Outreach Programs, go to www.srs.gov, click on "Outreach Programs," then "Educational Outreach Programs."

Wicks receives Joan Hodges Queneau Palladium Medal

Dr. George Wicks

Dr. George Wicks of Savannah River National Laboratory recently received the prestigious Joan Hodges Queneau Palladium Medal for 2005, in Washington, D.C., at the 26th Annual Awards Ceremony and Banquet of the American Association of Engineering Societies and National Academy of Engineering. This national award is presented jointly by the American Association of Engineering Societies and the National Audubon Society, and is designed to recognize individuals who encourage cooperation between engineering professionals and environmentalists to create "innovative solutions to environmental problems." The award was established by the National Audubon Society in 1977.

DUN shipments done

Recently, container No. 41 of depleted uranyl nitrate (DUN) left F Area, marking the last shipment of that material from the Savannah River Site.

Over the last two years, F Area Closure Projects' Outside Facility Deactivation Team #3 has overcome schedule, budget and technical issues to meet the DUN completion milestone date of May 31, 2005. All told, 132,379 gallons of DUN were shipped out of F Area's storage tanks and Hanford containers.

DUN was one of many materials — and among the last — that needed to be disposed of before F Area could reach its final milestones. Shipments were impacted for several months while waiting for a deactivation order, and for several more months by tight budgets in FY04 at SRS.

Team members pose with the 41st container of DUN before it leaves F Area. Pictured, from left, are Charles Byrd, Chester Hightower, Stephen Johnson, Leon Bussey, Jacob Nims and Steve Layton.

Since August 2004, funding has been authorized, and shipments have been leaving regularly for the Material and Energy Corporation in Oak Ridge, Tenn., where the material is solidified and sent on for final disposal at the Nevada Test Site.

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If you have questions or comments about any of the articles, call 803.952.9583.
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Westinghouse Savannah River Company
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